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QUESTIONS FROM PATIENTS ABOUT…PROSTATE CANCER, Part 1

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The prostate is a walnut-sized gland in men located just below the bladder. Its main function is to produce semen, a thick fluid that nourishes and transports sperm. Prostate cancer is the most common cancer among American men—about 1 in 6 will be diagnosed with it during his lifetime. African-American men are at a particularly high risk. The odds of having this cancer increase with age; about 80% of men at age 80 have it. But it is a "very individual-specific disease," so it's not the same for every man diagnosed with it. Men are asking questions:

1. **Are there signs or symptoms that I may have prostate cancer?**

There may be no symptoms at all, but if they appear, they may include:

* Blood in the urine
* The need to urinate frequently, especially at night
* Weak of interrupted urine flow
* Pain or burning feeling while urinating
* The inability to urinate
* Constant pain in the lower back, pelvis, or upper thighs

However, these symptoms can also be caused by **other** prostate problems that are not cancer, such as an enlarged prostate (benign prostatic hyperplasia or BPH) or an inflamed prostate (prostatitis).

2. **What is done to find out if there is prostate cancer?**

The most common two things that doctors will do are the digital rectal examination (DRE) and the prostate-specific antigen (PSA) blood test. For the DRE, the doctor feels the prostate gland by passing a gloved finger into your rectum to find hard or lumpy areas of the gland, which may (or may not) mean an abnormality. The PSA has been widely used to screen men for prostate cancer, but it's far from perfect. In fact, it cannot be said that the potential benefits of screening outweigh its potential harms.[i]

3. **Won't the PSA test tell me if I have prostate cancer?**

Maybe. Maybe not. A man's PSA level better indicates prostate size rather than cancer. An enlarged or inflamed prostate elevates the PSA level. A better measure of cancer is how fast the PSA level rises plus how high the level is. "Normal" is 4 dl/ml (or, according to some views, 2.5 dl/ml) or lower. Men with aggressive cancer often have very high PSA levels, say, above 22. But doctors can't agree on what level is meaningful. And the test can't tell you what type of cancer is present (if it is) or whether it's "clinically important."

False negative results occur, giving the impression there is no cancer when it is present. The test misses 82% of tumors in men under age 60, and 65% of cancers in older men. One in 6 men with a "normal" PSA of 4 dl/ml or below has prostate cancer. Among men with a PSA between 4 and 10, 20% to 25% have cancer.

False alarms—false positives—are common, especially in men aged 50 or older. 12 out of 15 men over 50 with elevated PSA levels don't have cancer. In one study, more than 20% of men had elevated PSA levels that fell back to normal when they were tested later. Many men with "abnormal" levels have normal levels when retested a year later. If your PSA level is a bit high, have another test a few weeks later before proceeding with further testing (including biopsy). There's a good chance it will be normal the second time around.

Some drugs (like Proscar, Propecia, or Avodart) used to treat and enlarged prostate can falsely lower a PSA reading. Very high PSA levels can occur after ejaculation—it takes two full days for most of the PSA to return to "normal" levels. (Avoiding sex for 48 hours before a PSA test is a good idea.) High PSA levels are found in cancers **other** than prostate—like breast, ovarian, lung, and uterine cancers as well as myeloid leukemia. Physical activity, especially cycling, can stimulate the prostate to produce more PSA, giving you a temporary high level. Physical manipulation of the prostate stimulates the gland to produce more PSA, so don't have the rectal exam before the PSA test! If you're under a lot of stress, you're three times as likely to have a high PSA as men who say they don't have much stress. PSA is a "dynamic measure"—it changes for many reasons.

Some think the PSA test has value. Some call it worthless, particularly for men aged 50 and over. Some say it's only a guideline. Everyone knows it's not an absolute measure—it ain't like a pregnancy test! As a general screening tool for prostate cancer, the PSA test was thrown on the scrap heap by the man called the inventor of PSA testing, Thomas A Stamey, MD. He says PSA is no longer a useful or reliable marker for detecting prostate cancer. His findings were based on his own experience plus his analysis of medical records of over 1300 men who had their prostate glands removed. He says prostate cancer is being over-diagnosed and over-treated because people have the "misperception" that if you have an elevated PSA level you have prostate cancer. Maybe we were misled.

Dr. Stamey feels that most, if not all, men eventually develop prostate cancer. But doctors are removing prostates from men whose cancer is so small that they don't need the procedure. These little cancers will never be a danger. "In smaller cancers, the PSA test is not relevant anymore; you might as well biopsy a man because he has blue eyes." Many thousands of unnecessary biopsies are performed and there is over-treatment with surgery, radiation, and drugs. Yet the survival ratio of men with prostate cancer has not improved. It's never been shown that routine PSA tests save lives.

There is even some evidence that PSA protein may prevent, rather than enhance, tumor progression. This means that the level may elevate for a darned good reason. The body may be trying to do what it needs to do. [ii]

4. **Since the PSA test doesn't nail a cancer diagnosis, are there any tests that do?**
Not really. Many tests have been tried, but none on their own tell if there is definitely prostate cancer. Measuring "**free PSA**" helps more accurately estimate the probability of cancer in men who have questionable total PSA levels. PSA is a protein produced by prostate gland cells appearing in the blood in two forms. About 85% is "complexed" PSA (attached to other proteins) and about 15% is "free" PSA (not attached to other proteins). The higher the percentage of free PSA, the lower the likelihood of prostate cancer. And there are fewer false-positive results in men who don't have cancer. High levels of **IGF-1** (insulin-like growth factor) may indicate an increased risk of developing cancer of the prostate. A related protein called IGF-binding-protein-3 (**iBP-3**) may also be measured since both these proteins appear to be related to cancer-cell growth. **AMAS** (anti-malignin antibody in serum) is often raised even before cancer is evident. Measuring **lycopene** levels has been suggested. Lycopene is a nutrient high in tomatoes, watermelon, and other foods that may help protect men from prostate cancer. A transrectal ultrasound scan (**TRUS**) can detect the size of the prostate and

display abnormal areas. Positive results on PSA or other tests are usually confirmed by biopsy—an unpleasant, not particularly accurate, potentially dangerous procedure. [iii]

5. **What's wrong with biopsies?**
Widespread PSA screening has caused a boom of surgical biopsies. One report showed that, of 1,500 men undergoing biopsies, only 165 had cancer. That's just over 10%, not many considering the expense, discomfort, and stress. There are risks of bleeding, inflammation, and infection—meaning further treatment. Even if cancer is detected, there's still no way to predict whether it will be aggressive or whether it will stay confined to the prostate and cause few, if any, problems. Autopsies of men over age 70 showed that 80% had prostate cancer that did not kill them. Something else will kill older men long before untreated, confined prostate cancer will. In fact, most prostate cancers stay confined to the prostate. "Having cancer cells in the prostate is incredibly common," explains Dr. Paul Frame. "The vast majority of these cancers don't progress and don't hurt anybody and don't lead to death."

Biopsies are random needle jabs into the prostate. No matter how many times the gland is stuck, there's no way of knowing if cancer lurks somewhere else where the needle didn't go. The surgeon hopes to get lucky. If the doctor does get "lucky" and finds some cancer cells, then he/she may cause the cancer cells to spread. Cutting into cancer by sticking a needle into the gland and drawing it out can cause an immediate spread of the cancer. Thus, if there is cancer and it is confined to the gland and would have stayed that way, it can be changed into a spreading cancer by those needles pulling out abnormal cells.

If cancer cells are found, they are graded based on how they appear under a microscope. The grading system is called the "Gleason score." The scores range from 1 to 10 (to describe the range the tissue varies from normal) and are thought to indicate the likelihood that the cancer will spread. The higher the score, the more aggressive the cancer may be. But there's no evidence to link the Gleason score to an increased chance of survival.

A study found that the most important predictors for prostate cancer were: *A manual exam of the prostate to feel for a hardened area that could be cancerous. *An ultrasound performed through the rectum, which may define a suspicious area. *Being over age 65, since 90% of prostate cancers fall into that age group. *A PSA score compared to the volume of the prostate gland. (If your gland is large, it's more likely you have a high PSA with no cancer.) If all these items were factored in, 200,000 biopsies could be safely eliminated every year. [iv]

6. **But if I do have prostate cancer, what should be done?**
There are several options given to men once cancer is diagnosed. Surgery to remove the prostate gland, radiation, seed implantation, cryosurgery, and hormonal therapy are the most common, and chemotherapy occasionally. There are no clear definitive answers when it comes to treatment. And all these procedures have potentially serious side effects. You must become informed because ultimately, you must take responsibility for the final decision. Doctors' advice differs: If a man sees a urologist, there's a 70% chance he'll be advised to have the prostate removed. If he sees a urologist AND a radiation oncologist, there's only a 15% he'll be told to have surgery. Many doctors recommend "watchful waiting" when the cancer is confined to the prostate gland since it is rarely problematic. This means monitoring but no treatment. It's only when cancer metastasizes (spreads) is it life-threatening.

Charles Myers, MD, an oncologist and a prostate cancer survivor, wrote: "I have come to the conclusion that you, as a patient, simply cannot allow the management of your cancer and your life to be limited by the narrow views of the physicians you encounter…It is apparent that the behavior of this cancer is influenced by many things; it's controlled by your lifestyle as much as by anything the medical profession typically provides." Informed patients sometimes choose alternative therapies that include detoxification and nutrition. [v]

7. What about surgery?

Radical prostatectomy is removal of the entire prostate gland. It's said to have a "success rate" of 70 to 85%. If you don't have a prostate, you can't have prostate cancer, right? Yet the recurrence-free survival rates are 71% at 5 years but only 63% at 7½ years. The cancer survival rate decreases with the passing of years from diagnosis.

Many studies have overestimated the benefits of surgery to remove the prostate. One reason is considering as survivors only those who "completed treatment" but don't count the fatalities who didn't complete the trial. An analysis corrected for such inaccuracies and compared survival in almost 60,000 men treated with various medical methods. The conclusion was that previous studies "have generally overestimated the benefits of radical prostatectomy."

A 10-year trial compared surgery with watchful waiting (monitoring without aggressive treatment). Although fewer men who had surgery died of prostate cancer, the surgery did not improve overall survival. After twenty-some years, men who had surgery have survival rates that, on average, are the same as those with low-grade, low-stage, untreated prostate cancer. If you're over 65 and have a contained, low-grade prostate cancer and you don't choose surgery, you have the same life expectancy as anyone else. Further, surgery may not remove all the cancer and can even spread it. Side effects include incontinence (lack of bladder control), impotence (inability to have an erection), deep vein thrombosis or pulmonary embolism weeks after surgery, further surgery, and even death. "Laparoscopic prostatectomy" is less invasive but still carries the risks of incontinence and impotence. Cryotherapy is not really surgery—it entails placing a special probe inside or near the prostate cancer to freeze and destroy cancer cells. [vi]

8. Then how about radiation therapy?

Two types are used—*external* beam radiation and *internal* radiation seed implants. One or both may be used. If both are used and surgery is not, the risks of urinary incontinence and impotence are a bit lower. But the risk of damage to the rectum increases. Men who have both surgery and radiation may go a little longer without a recurrence of cancer, but improvements in cancer-free survival and overall survival don't change. You won't live any longer. Many men with localized (non-spreading) prostate cancer have only a temporary decrease in PSA levels after radiation or surgery. In fact, radiation can cause other cancers. And it is cumulative—the more you have, the more the harm and danger.

Radioactive seed placement (brachytherapy) involves implants of small radioactive pellets into the prostate to shrink the prostate tumor. It results in difficulty voiding urine, sometimes requiring surgery to improve urinary flow. And it is often combined with hormonal blockage drugs which have their own detriments. [vii]

8. What's the hormonal blockade therapy?

There are three types: surgical removal of the testes, luteinizing hormone-releasing hormone therapy, and androgen (hormone) blockage drugs. The goal of all three is castration. All three can cause impotence, loss of sexual desire, hot flashes, mood swings, depression, fatigue, weight gain, breast enlargement, reduced brain function, bone loss, and loss of muscle mass. Androgen deprivation therapy (ADT) is given to 40% of men with cancers that have spread beyond the prostate. Up to one-fifth of patients getting ADT experience a crippling variety of osteoporosis, quadrupling their risk of a fractured spine. Decreased libido and impotence are experienced by nearly 90% of the men.

The idea is to stop production of sex hormones, especially testosterone, which is thought to fuel the cancer. It doesn't kill cancer cells; it's believed to stop their spread. The normal prostate gland needs testosterone for growth. That's why therapy often involves lopping off the testicles or giving drugs that antagonize male hormones, such as Proscar and estrogen drugs. Yet, a study in aging men with low testosterone levels who were given testosterone hormone therapy found there was no increased risk of prostate cancer. They didn't develop prostate cancer because they got testosterone. Swedish researchers studied testosterone levels in both men with prostate cancer and men without prostate cancer. They found the risk of prostate cancer was **lower** in men with **higher** blood levels of testosterone. This and other research places doubt on the notion that testosterone contributes to prostate cancer.

There is evidence that hormone **disruptors** are a more potent factor in causing prostate (and other) cancers. Hormonal imbalances can increase the risk of prostate cancer and perhaps its aggressiveness. There is pervasive pollution of the environment by chemicals that are hormone disruptors—like pesticides, plastic residues and dozens of industrial chemicals including dioxins and PCBs. Men may also consume trans fats and other altered fats, and/or have multiple nutrient deficiencies—all affecting the intricate hormone symphony. The goal is hormone balance. The body knows best how to do this. Giving it the food or fuel it needs to do this and relieving it of toxins that interfere with its ability to do so are both essential.

Besides, if high testosterone levels increased men's risk of prostate cancer, then young men (ages 18 to 25)—who have the highest testosterone levels—would have the highest rate of this cancer. They don't. Older men, the ones with lowering testosterone levels, have a higher incidence. A Harvard Medical School urologist wrote: "There is an absence of scientific data supporting the concept that higher testosterone levels are associated with an increased risk of prostate cancer." Actually, men with low testosterone levels have a substantial rate of this cancer. Dr. Sherry Rogers says: "Prostate cancer cells that become transformed so that hormones no longer work are the most viciously deadly." If the prostate no longer uses testosterone, "it is an automatic death sentence." Use of drugs to deplete testosterone in men with aggressive prostate cancer has a success rate of "essentially ZERO." [viii]

10. **Is "watchful waiting" a good choice?**

If the cancer is confined to the prostate gland, it may be. These small cancers are usually "low-grade"—not aggressive. Surveillance with little or no treatment is all that is suggested. "Watchful waiting" has been shown to be successful, particularly in men 65 and older. "The vast majority of men with low-grade prostate cancer die of other causes." This way, you can avoid radiation or surgery along with their side effects and "decreased quality of life."

In most men, prostate tumors grow almost imperceptibly, erupting into spreading cancers in only 10% of cases. That means 90% of the men diagnosed with prostate cancer would live to ripe old ages without major treatment and would never have known they even had cancer unless they were tested. Prostate cancer "has an extraordinarily small death rate of 226 per 100,000 men older than 65 years." Deaths from prostate cancer are even rarer in men under age 65. Small, non-aggressive cancers are not as important as spreading high-grade types, but doctors find too many small ones that they feel compelled to treat aggressively. Many men diagnosed with confined, low-grade prostate cancer are treated with surgery and/or radiation. Following up on such men, researchers found a "substantial rate of relapse after long intervals during which they were free of symptoms due to disease, although they were not always free of symptoms due to treatment." Put another way, the treatments helped the symptoms only temporarily, but they created other symptoms which were often permanent.

Since the widespread use of PSA testing in the US, the incidence of prostate cancer in white men has doubled. But it increased only slightly in areas such as the United Kingdom where PSA screening is not used as much. So many American men would have remained unaware of any problem and lived their lives until something else killed them, but now have impaired quality of life because they're overcome with anxiety about their PSA test or because of receiving treatments that gave them symptoms. It's not that the cancer rate is increasing. It's just that doctors are detecting more cancer. But this has **not** resulted in more cures. The mortality rate among prostate cancer patients has not decreased at all. Instead, there are now many thousands of men with a non-threatening, slow-growing prostate cancer, who previously were unconcerned but are now frightened to death for no justifiable reason.

The 5-year survival rate for confined prostate cancer is **100%**. A study of survival in elderly men with prostate cancer found that the difference in the death rate from prostate cancer in the group treated versus the group simply observed was a measly 0.6%. This difference "may not outweigh the potential long-term adverse effects caused by the treatment." Bottom line: "Many more men die with prostate cancer than of it." [ix]

11. **Is there anything I can do to lower my risk of developing prostate cancer?**
Absolutely! Details will appear in the next issue.

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[i] John L Zeller, *JAMA*, 15 Nov 2006, 296(19):2402; *Alternative Medicine Alert*, Mar 2006, 9(3):S1-S2; *Health Facts*, Aug 2006, 31(8):3; Barnardo Rocco, Bob Djavan, *Lancet*, 3 Mar 2007, 369(9563):723-4; John Swales, Graham Winyard, Steven H Woolf, *Lancet*, 12 Apr 1997, 349(9058):1098-9; Henrik Gronberg, *Lancet*, 8 Mar 2003, 361(9360):859-64; BE Sirovich, LM Schwartz, et al, *JAMA*, 19 Mar 2003, 289(11):1414-20; Stephen Frankel, George Davey Smith, et al, *Lancet*, 29 Mar 2003, 361(9363):1122-28.

[ii] David Williams, *Alternatives*, Dec 1999, 8(6):41-2 & Aug 2004, 10(14):109; Sherry Rogers, *Total Wellness*, Nov 2006:7; *Duke Med HealthNews*, Feb 2007, 13(2):9; Peter Albertsen, *JAMA*, 15 Nov 2006, 296(19):2371-3; Ian Thompson, Donna Pauler Ankerst, et al, *JAMA*, 6 July 2005, 294(1):66-70; Rob Ivker, *Nat Health*, May 2000, 30(4):90; *Health & Healing*, Apr 2000, 13(4):5 & June 2000, 10(6):5; Robert Anderson, *Nat Health*, Aug 2003, 33(6):32-3; Wm Campbell Douglass, *Real Health*, Sept 2003, 3(4):2-3; James Eastham, Elyn Riedel, et al, *JAMA*, 28 May 2003, 289(20):2695-2700; Matti Hakama, Anssi Auvinen, *JAMA,* 1 Oct 2003, 290(13):1705-6; *UC Berkeley Wellness Lttr*, Sept 2007, 23(12):7; Brian Vastag, *JAMA*, 27 Feb 2002, 287(8):969-70; Kevin Ross, H Ballentine Carter, et al, *JAMA*, 20 Sept 2000, 284(11):1399-1405; Mike Mitka, *JAMA*, 17 Nov 2004, 292(19):2326-7; Ralph Moss, *Townsend Lttr D&P*, Nov 2003, 244:35; Eric Singer, David Penson, et al, *JAMA*, 7 Mar 2007, 297(90:949-50; Kieran Jefferson, Amrita Dwivedi, et al, *Lancet*, 25 Mar 2000, 355(9209):1100-01; *J Nat'l Cancer Instit*, 1999, 91:1635-9; B Kerfoort, E Holmberg, et al, *Arch Intern Med*, 2007, 167:1367-72.

[iii] *HealthNews*, June 2003, 9(6):12 & April 2001, 7(4):3; Robert Uzzo et al, *Urology*, 2003, 61:754-759; Sherry Rogers, *Total Wellness*, Feb 2000:1-3; Michelle Clare, *What Doctors Don't Tell You*, Aug 2004, 15(5):9; *HealthFacts*, May 2003, 28(5):4-5.

[iv] *UC Berkeley Wellness Lttr*, Nov 2000, 17(2):1-2 & Jan 2005, 21(4):1-2; *Tufts Univ Hlth & Nutrition Lttr*, Dec 2003, 21(10):6; Ralph Moss, *Townsend Lttr D&P*, Nov 2003, 244:35; Wm Campbell Douglass, *Real Health*, Oct 2004, 4(5):5-7; ED Crawford, *Lancet*, 23 Apr 2005, 365(9469):1447-9; Robert Rowan, *Second Opinion*, Feb 2005, 15(2):1-3 & Dec 2003, 13(12):5-6; *HealthNews*, Jul 2004, 10(7):4.

[v] David Ross, *Townsend Lttr D&P*, June 2003, 239:72-5; Ashesh Jani, Samuel Hellman, *Lancet*, 22 March 2003, 361(9362):1045-53; Gina Nick, *Townsed Lttr D&P*, Aug/Sept 2004, 257:66-73; *Duke Med HealthNews*, Sept 2007, 13(9):2.

[vi] Shari Lieberman, James Forsythe, *Altern & Complement Ther*, Aug 2005, 11(4):203-7; Kim Wallace, *What Doctors Don't Tell You*, Oct 2005, 16(7):18-9; Arthur Burnett, *JAMA*, 1 June 2005, 293(21):2648-53; *Lancet*, 1997, 349:906-10; *N Engl J Med*, 2002, 347:781-9; *Scand J Urol Nephrol Suppl*, 1995, 172:65-72; *JAMA*, 1995, 274:626-31; *J Urol*, 1996, 155:238-42; *Altern Med Alert*, Mar 2006, 9(3):S1.

[vii] *HealthNews*, April 2007, 13(4):8-9 & June 2004, 10(6):2; Theodore L DeWeese, Danny Y Song, *JAMA*, 14 Sept 2005, 294(10:1274-5; Anthony L Zietman, Michelle L DeSilvio, et al, *JAMA*, 14 Sept 2005, 294(10:1233-9; Shari Lieberman, James W Forsythe, *Alternative & Complementary Ther*, Aug 2005, 11(4):203-7; Ian M Thompson, Catherine M Tangen, et al, *JAMA*, 15 Nov 2006, 296(19):2329-35.

[viii] Wm Campbell Douglass, *Real Health*, Jan 2003, 2(9):4-5 & Aug 2005, 5(3):4-5; Nima Sharifi, James L Gulley, et al, *JAMA*, 13 July 2005, 294(2):238-44; John R Lee, *John R Lee MD Medical Lttr*, Dec 2001:2 & Aug 2000:2-3; VB Shahinian, Y-F Kuo, et al, *N Engl J Med*, 13 Jan 2005, 352(2):154-64; Issa Khalaf, *Gerson Healing Newsletter*, May/June 2007, 22(3):5-6; MJ Friedrich, *JAMA*, 15 Nov 2006, 296(19):2305-6; Leonard S Marks, Norman A Mazer, et al, *JAMA*, 15 Nov 2006, 296(19):2351-61; Jonathan V Wright, *Nutrition & Healing*, Sept 2007, 14(7):4 & Aug 2006, 13(7):4, 8 & July 2003, 10(6):4-5; Sherry A Rogers, *Total Wellness*, Feb 2006:1-2; Tina Tan, *What Doctors Don't Tell You*, Apr 2005, 16(1):7; Sidney M Wolfe, *Worst Pills, Best Pills News*, Aug 2003, 9(8):57-8.

[ix] *HealthNews*, Jun 2006, 12(6):13; *Tufts Univ Health & Nutrition Lttr*, Aug 2005, 23(6):8 & Mar 2005, 23(1):3; B Harder, *Sci News*, 14 May 2005, 167(20):309-10; Jaime Olano, *JAMA*, 6 Oct 2004, 292(13):1549-50; *HealthFacts*, Jul 2004, 29(7):5 & Feb 2005, 30(2):3 & May 2003, 28(5):4-5; Mary M Collins, David Ransohoff, et al, *JAMA*, 12 Nov 1997, 278(18):1516-9; S Sternberg, *Sci News*, 5 Apr 1997, 151(14)"205; Grace Lu-Yao, Siu-Long Yao, *Lancet*, 29 Mar 1997, 349(9056):906-10; Ian Tannock, *Lancet Oncology*, May 2000:17-19; David Williams, *Alternatives*, Feb 2002, 9(8):62; Peter Albertsen, James Hanley, et al, *JAMA*, 4 May 2005, 293(17):2095-2101; Yu-Ning Wong, Nandita Mitra, et al, *JAMA*, 18 Apr 2007, 297(15):1651-3; Mark Litwin, David Miller, *JAMA*, 13 Dec 2006, 296(22):2733-4; Mitchell Anscher, *JAMA*, 27 Jul 2005, 294(4):493-4; Stephen Freedland, Elizabeth Humphreys, et al, *JAMA*, 27 Jul 2005, 294(4):433-9.

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